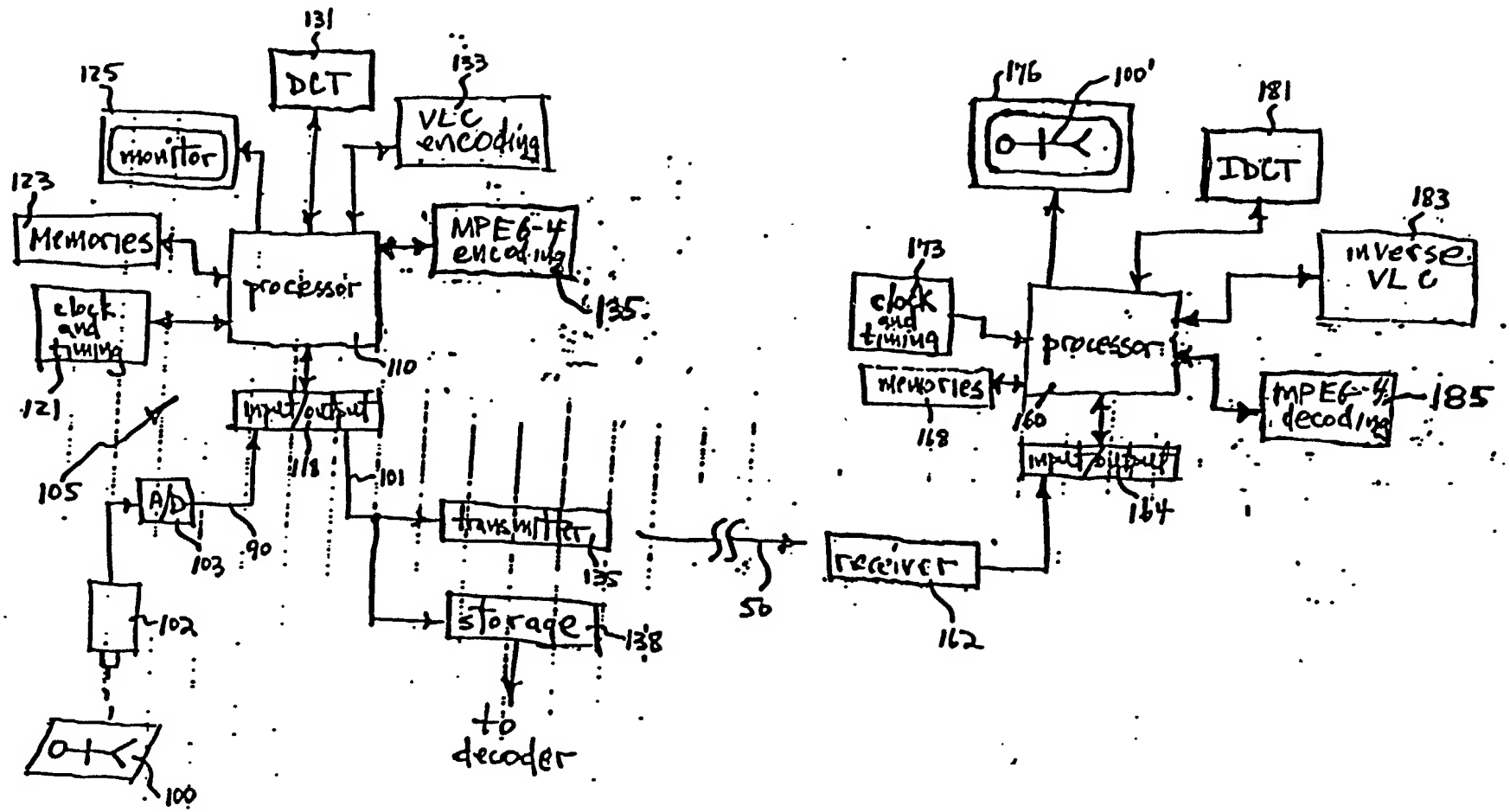


Figure 1

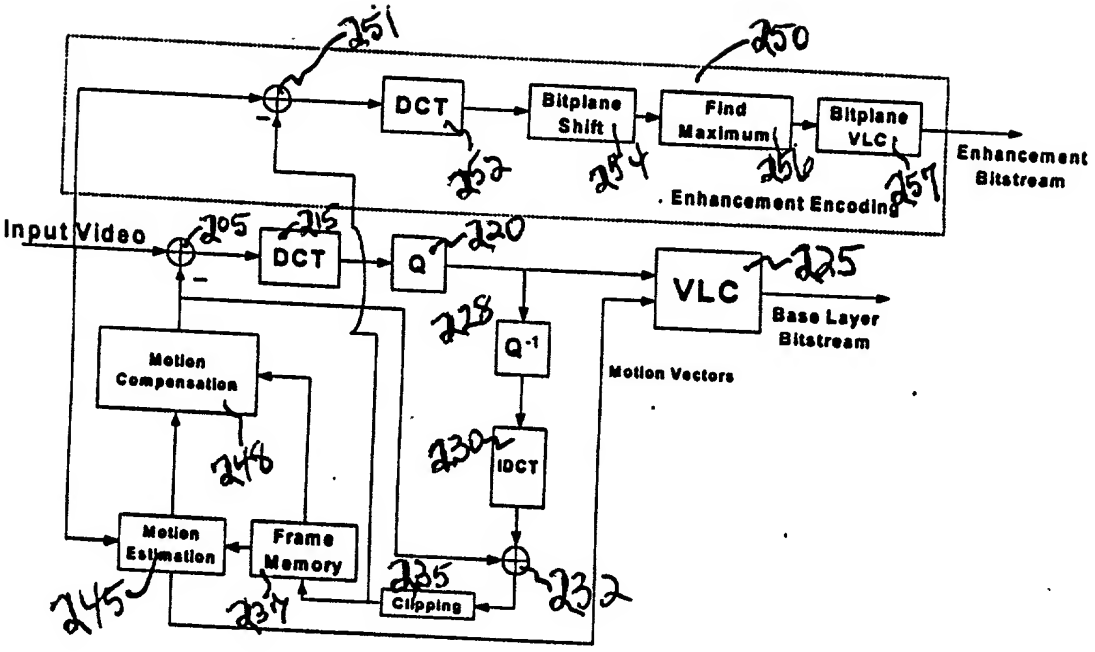

251
250
DCT
Bitplane Shift
Find Maximum
Bitplane VLC
Enhancement Bitstream
252
254
256
257
Enhancement Encoding
Input Video
205
215
DCT
Q
220
VLC
225
Base Layer Bitstream
228
Q-1
Motion Vectors
Motion Compensation
246
230
IDCT
Motion Estimation
Frame Memory
245
237
235
Clipping
232

Figure 2

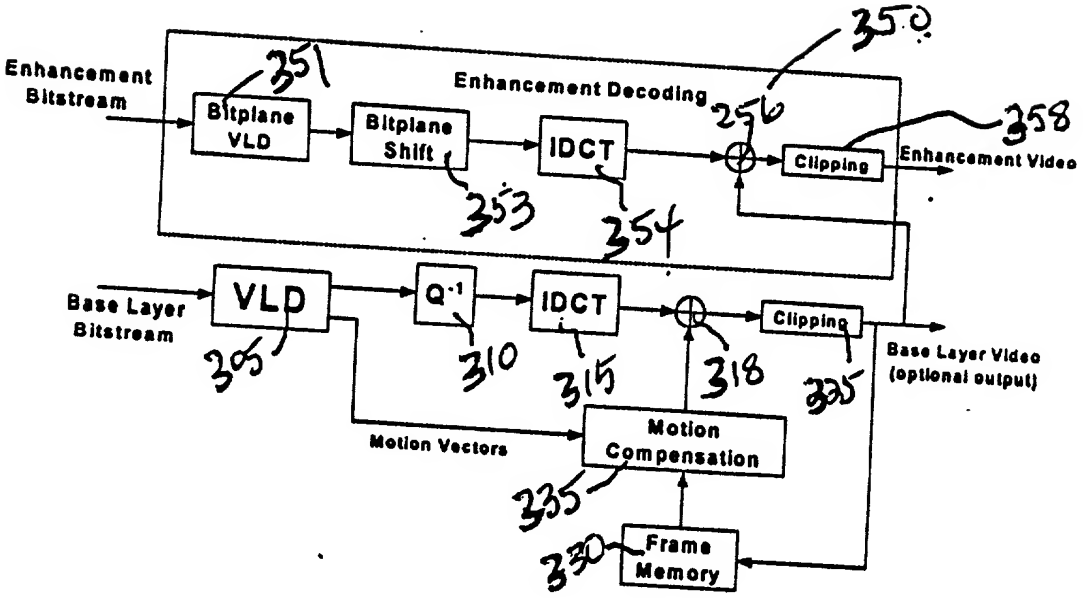

Enhancement Bitstream
351
Bitplane VLD
Bitplane Shift
IDCT
350
Enhancement Decoding
256
Clipping
358
Enhancement Video
353
354
Base Layer Bitstream
VLD
Q-1
IDCT
Clipping
Base Layer Video (optional output)
305
310
315
318
325
Motion Vectors
Motion Compensation
335
330
Frame Memory

Figure 3

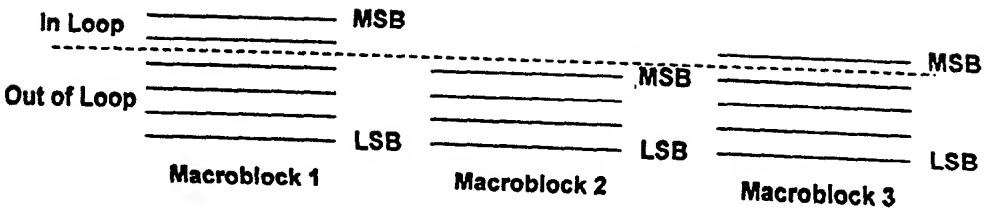


Figure 4

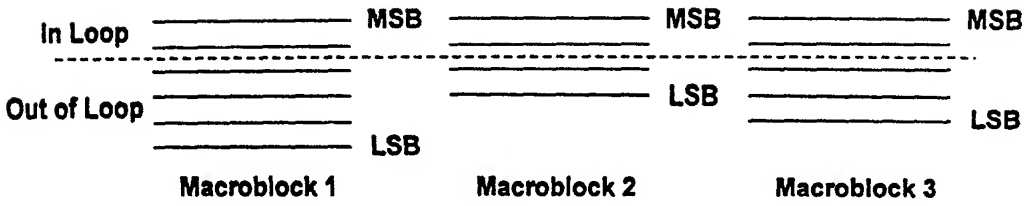


Figure 5

fgs_vop_mc_bit_plane_used	5	uimsbf
if (fgs_vop_mc_bit_plane_used>0) {		
fgs_vop_mc_bit_plane_alignment	5	uimsbf
}		

Figure 6

fgs_vop_mc_bit_plane_alignment	meaning
0	reserved
1	LSB Alignment
2	MSB Alignment
3	MSB-1 Alignment
...	...
31	MSB-29 Alignment

Figure 7

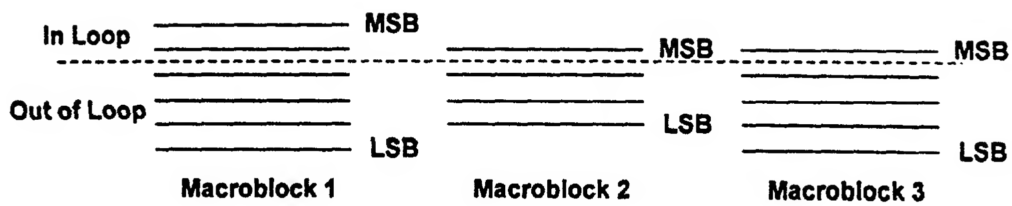
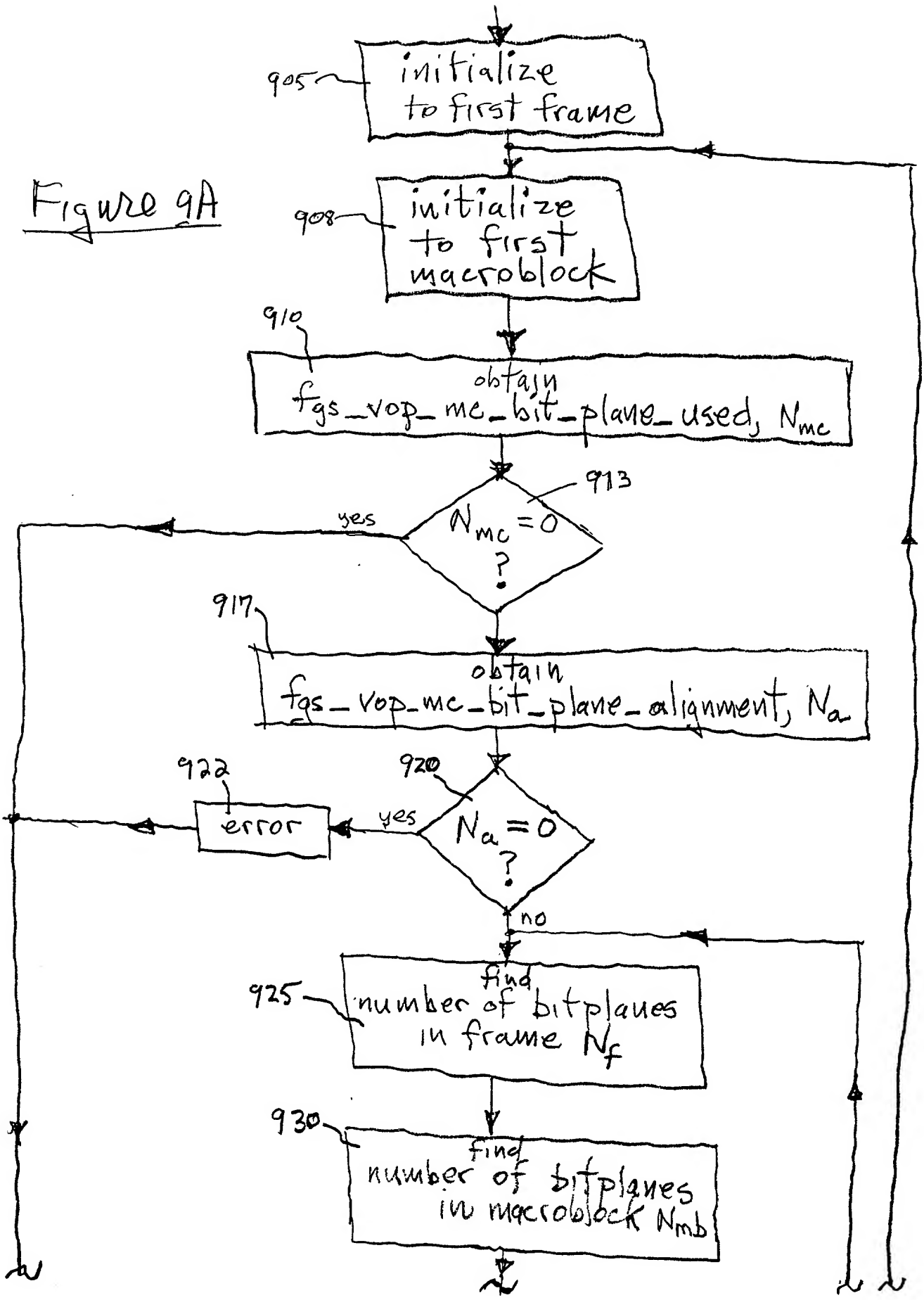


Figure 8

Figure 9A


905
initialize to first frame
908
initialize to first macroblock
910
obtain fgs_vop_mc_bit_plane_used, Nmc
913
Nmc = 0 ?
yes
917
obtain fgs_vop_mc_bit_plane_alignment, Na
920
Na = 0 ?
yes
922
error
no
925
find number of bitplanes in frame Nf
930
find number of bitplanes in macroblock Nmb

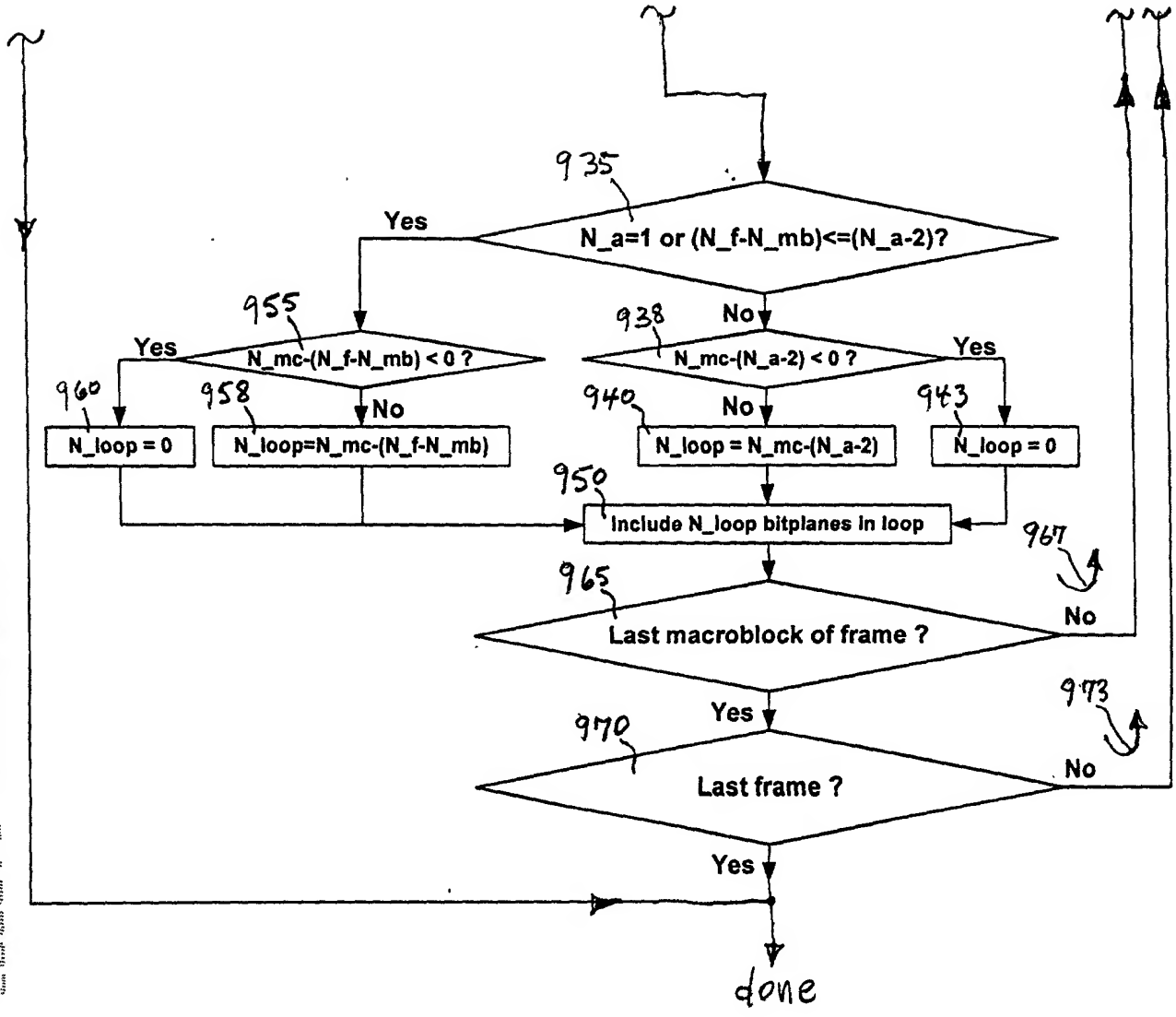
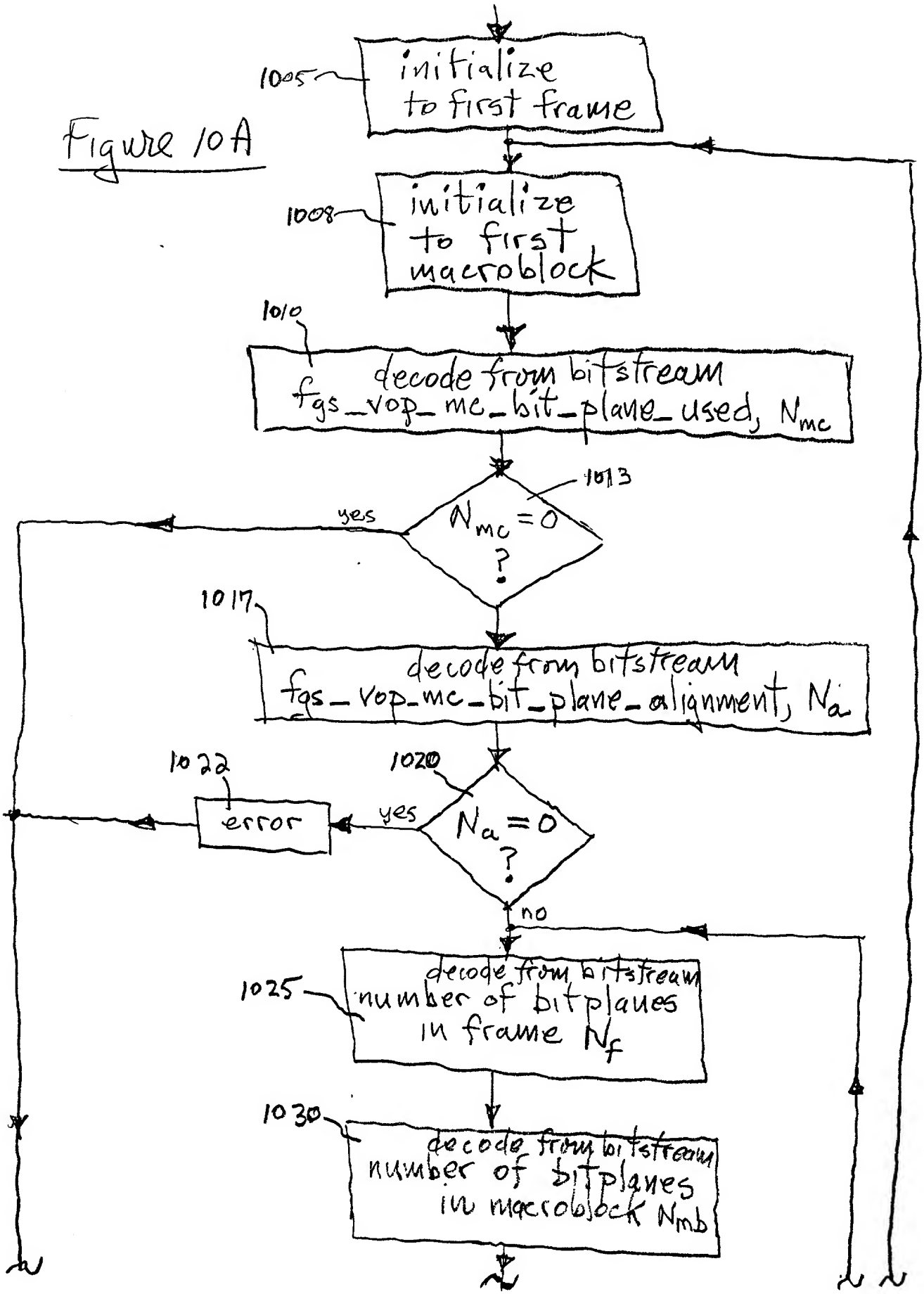

935
N_a=1 or (N_f-N_mb)<=(N_a-2)?
Yes
No
955
N_mc-(N_f-N_mb) < 0 ?
Yes
No
938
N_mc-(N_a-2) < 0 ?
No
Yes
960
N_loop = 0
958
N_loop=N_mc-(N_f-N_mb)
940
N_loop = N_mc-(N_a-2)
943
N_loop = 0
950
Include N_loop bitplanes in loop
967
965
Last macroblock of frame ?
No
Yes
973
970
Last frame ?
No
Yes
done

Figure 9B

Figure 10A


1005
initialize to first frame
1008
initialize to first macroblock
1010
decode from bitstream fgs_vop_mc_bit_plane_used, N_{mc}
1013
$N_{mc} = 0$?
yes
1017
decode from bitstream fgs_vop_mc_bit_plane_alignment, N_a
1020
$N_a = 0$?
yes
1022
error
no
1025
decode from bitstream number of bitplanes in frame N_f
1030
decode from bitstream number of bitplanes in macroblock N_{mb}

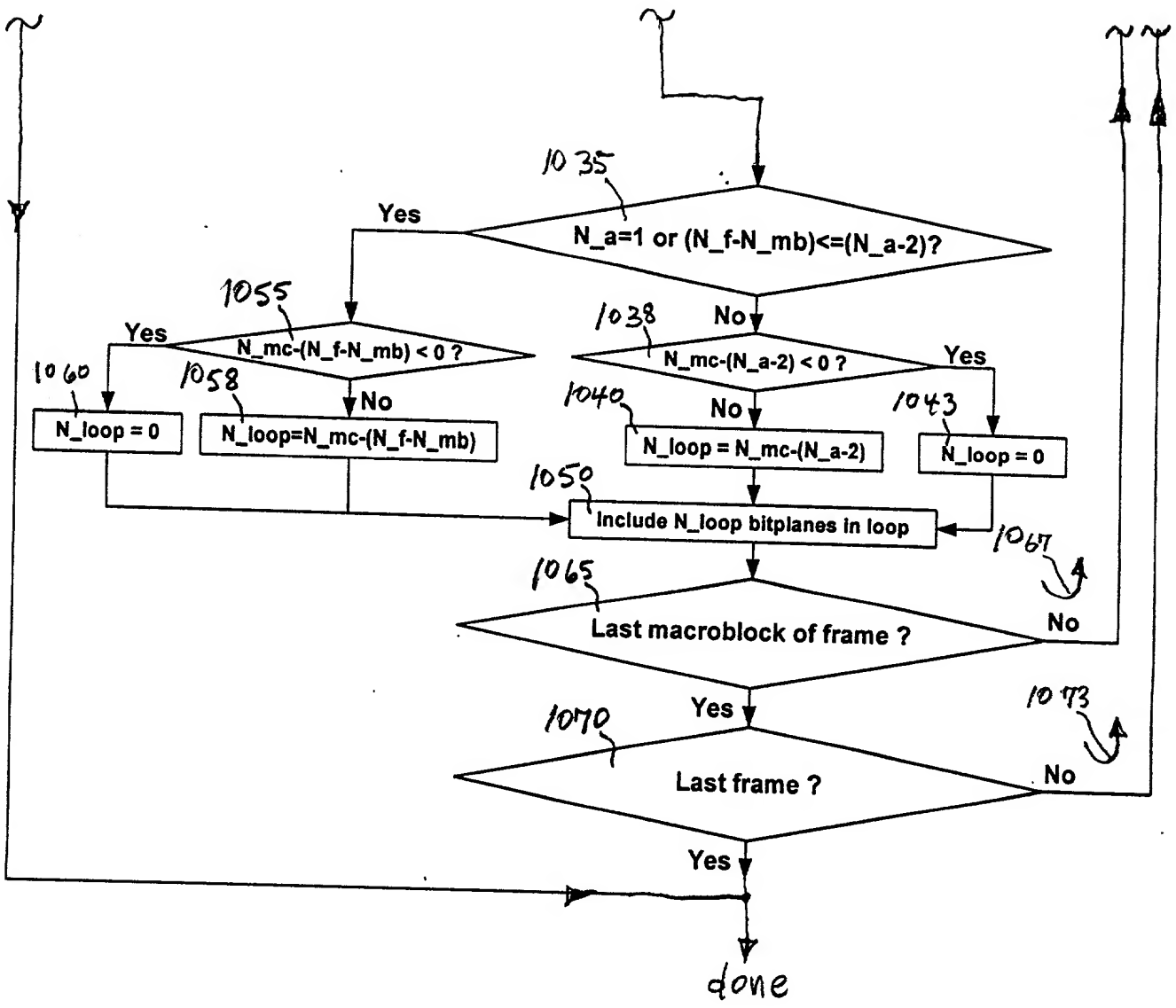

1035
N_a=1 or (N_f-N_mb)<=(N_a-2)?
Yes
No
1055
N_mc-(N_f-N_mb) < 0 ?
Yes
No
1060
N_loop = 0
1058
N_loop=N_mc-(N_f-N_mb)
1038
N_mc-(N_a-2) < 0 ?
Yes
No
1040
N_loop = N_mc-(N_a-2)
1043
N_loop = 0
1050
Include N_loop bitplanes in loop
1067
1065
Last macroblock of frame ?
No
Yes
1073
1070
Last frame ?
No
Yes
done

Figure 10B